PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Hiroshi OGAWA, *et al.*

Appln. No.: 09/810,230

Confirmation No.: 6907

Filed: March 19, 2001

Docket No: Q61200

Group Art Unit: 1774

Examiner: Camie S. THOMPSON

For: RADIATION IMAGE CONVERSION PANEL AND MANUFACTURING METHOD THEREFOR

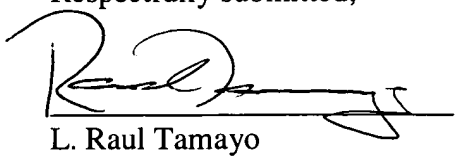
SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of $340.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



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Date: December 3, 2004

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellants submit the following:

Table of Contents

I. REAL PARTY IN INTEREST

The real party in interest is Fuji Photo Film Co., Ltd., the assignee of the present application. The assignment was recorded on March 19, 2001, at reel 011628, frame 0566.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' counsel, and the assignee of the application are not aware of any other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-10 are pending in the application.

Claims 1-6 and 9-10 are rejected.

Claims 7-8 are withdrawn from consideration for being drawn to non-elected invention.

Claims 1-6 and 9-10 are being appealed.

Claims 1-6 and 9-10 are set forth in their entirety in the Claims Appendix submitted herewith.

IV. STATUS OF AMENDMENTS

On August 3, 2004, a Response Under 37 C.F.R. § 1.116 was filed in response to the final Office Action mailed March 3, 2004, together with a petition for two months of extension time.

The Response did not include an amendment to the claims.

The Advisory Action mailed September 7, 2004, indicates that the remarks submitted in the August 3rd Response have been considered but do not place the application in condition for allowance. The Examiner attached an additional page to the Advisory Action and provided therein her comments on why the application is not in condition for allowance. To briefly summarize, the Examiner indicated that "[t]he stabilizing compound of the Bringley reference reads on instant claim 1."

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 1 is drawn to a radiation image conversion panel. Page 12, lines 23-26, of the specification. The radiation image conversion panel comprises a support body. Page 35, lines 1-20. The radiation image conversion panel also comprises a phosphor layer provided on the support body. Paragraph bridging pages 25 and 26. Claim 1 requires the phosphor layer to contain a binding agent, a phosphor, and at least aryl carboxylic acid or alicyclic carboxylic acid. Paragraph bridging pages 25 and 26.

Claim 1 specifically requires the aryl carboxylic acid or alicyclic carboxylic acid to be expressed by the formula R-R^1-COOX or by the formula R-COOX. Paragraph bridging pages 25 and 26. According to Claim 1, R represents (1) an aryl group; (2) an aryl group, replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, a carboxylic acid group, or a halogen group; (3) a hydroaryl group; or (4) a hydroaryl group (alicyclic group), replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, or a halogen group; R^1 is a hydrocarbon radical whose number of carbons is 1 to 12; and X represents a hydrogen atom, alkaline metal, or $-N^+(R^2)_4$ (where R^2 represents an alkyl group whose number of carbons is 2 or less). Paragraph bridging pages 25 and 26.

Claim 2 is a dependent claim. It depends from Claim 1. Claim 2 narrows the definition of R in the formula R-R^1-COOX or the formula R-COOX, such that the letter R is either (1) an aryl group or (2) an aryl group, replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, or a halogen group. Paragraph bridging pages 25 and 26, as well as page 26, lines 6-16.

Claims 3 and 4 are dependent claims. Claim 3 depends from Claim 1, and Claim 4 depends from Claim 2. Claims 3 and 4 contain the same substantive limitation. Specifically, Claims 3 and 4 require the binding agent to be a thermoplastic elastomer with a softening temperature or melting point of 30 °C to 150 °C. Page 32, lines 2-19.

Claims 5 and 6 are dependent claims. Claim 5 depends from Claim 3, and Claim 6 depends from Claim 4. Claims 5 and 6 contain the same substantive limitation. Specifically, Claims 5 and 6 require the binding agent to be polyurethane resin. Page 32, lines 11-19.

Claims 7-8 are withdrawn from consideration for being drawn to non-elected invention.

Claim 9 is a dependent claim. It depends from Claim 1. Claim 9 requires the phosphor layer to have been formed by dispersing and coating the phosphor, the aryl carboxylic acid or alicyclic carboxylic acid, and the binding agent. Paragraph bridging pages 30 and 31. Claim 9 further requires the phosphor layer and the support body to have been bonded together by placing the phosphor layer on the support body and compressing the phosphor layer at a temperature higher than the softening temperature or melting point of the binding agent. Paragraph bridging pages 30 and 31.

Claim 10 is a dependent claim. It depends from Claim 1. Claim 10 requires a surface process to have been performed on particles of the phosphor with the aryl carboxylic acid or alicyclic carboxylic acid. Paragraph bridging pages 30 and 31. Claim 10 also requires the phosphor layer to be formed by dispersing and coating the surface-processed phosphor particles and the binding agent. Paragraph bridging pages 30 and 31. Claim 10 further requires the phosphor layer and the support body to have been bonded together by placing the phosphor layer on the support body and compressing the phosphor layer at a temperature higher than the softening temperature or melting point of the binding agent. Paragraph bridging pages 30 and 31.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue presented for review is:

whether the Examiner erred in rejecting Claims 1-6 and 9-10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,523,558 to Bringley, *et al.* ("Bringley").

VII. ARGUMENT

The Rejection

Claims 1-6 and 9-10 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,523,558 to Bringley, *et al.* ("Bringley").

Focusing on independent Claim 1, and summarizing, the Examiner asserts that Bringley discloses a radiographic phosphor panel comprising a support and a luminescent layer, as per instant Claim 1. Appellants refer to page 3 of the final Office Action mailed March 3, 2004, wherein the Examiner refers to column 3, lines 25-36, of Bringley. The Examiner also asserts that the reference discloses the use of a stabilizing compound that can be an aryl carboxylic acid as per instant Claim 1. Appellants refer to page 3 of the March 3rd final Action, wherein the Examiner refers to column 3, line 25, through column 4, line 63, of Bringley.

In particular, the Examiner asserts that the Bringley reference "discloses a radiographic phosphor that contains a stabilizing compound, $D_x[MH_aR_b]_y$, wherein R can be a carboxy and may be substituted or unsubstituted." Appellants refer to the Continuation Sheet, Form PTOL-303, attached to the Advisory Action mailed September 7, 2004. The Examiner further asserts therein that "[t]he stabilizing compound of the Bringley reference reads on instant claim 1."

The Error in the Rejection

The error in the rejection is that not each and every element of independent Claim 1 is found, either expressly or inherently described, in Bringley.

Why Claims 1-6 and 9-10 are Patentable Under 35 U.S.C. § 102

The claimed aryl carboxylic acid or alicyclic carboxylic acid does not encompass the stabilizing compounds disclosed in Bringley.

The claims recite a specific aryl carboxylic acid or alicyclic carboxylic acid. In particular, the aryl carboxylic acid or alicyclic carboxylic acid recited in Claim 1 is an aryl carboxylic acid or alicyclic carboxylic acid having the formula R-R^1-COOX or R-COOX.

In the formula R-R^1-COOX or R-COOX, R must be (1) an aryl group; (2) an aryl group, replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, a carboxylic acid group, or a halogen group; (3) a hydroaryl group; or (4) a hydroaryl group (alicyclic group), replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, or a halogen group.

In the formula R-R^1-COOX or R-COOX, X represents a hydrogen atom, alkaline metal, or $-N^+(R^2)_4$ (where R^2 represents an alkyl group whose number of carbons is 2 or less).

In the formula R-R^1-COOX, R^1 is a hydrocarbon radical whose number of carbons is 1 to 12.

Accordingly, Claim 1 does not include within its scope any and all aryl carboxylic acids or alicyclic carboxylic acids. Claim 1 is specifically directed to radiation image conversion panels comprising an aryl carboxylic acid or alicyclic carboxylic acid having the formula R-R^1-COOX or R-COOX, wherein R, R^1, and X are particularly defined (see above and Claim 1).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP §2131. The identical invention must be shown in as complete detail as is contained in the claim. Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The metal hydride stabilizing compounds identified by the Examiner, which are disclosed at column 4, lines 15-68, of Bringley, and are represented by the formula $D_x[MH_aR_b]_y$, do not anticipate the specific aryl carboxylic acid or alicyclic carboxylic acid recited in Claim 1 because they do not fall within the scope of the specific aryl carboxylic acid or alicyclic carboxylic acid recited in Claim 1. It is not enough that Bringley discloses that the R group in the formula

$D_x[MH_aR_b]_y$ may be an aryl group (column 4, line 39) or that Bringley discloses as a linking group between 2 to 3 linked rings of the R group in formula $D_x[MH_aR_b]_y$. Bringley must disclose an aryl carboxylic acid or alicyclic carboxylic acid having the formula R-R^1-COOX or R-COOX, wherein R, R^1, and X are particularly defined as in present Claim 1, and Bringley fails to do so.

For example, even though Bringley discloses an aryl group as an example of the R group in its metal hydride stabilizing compound, Bringley's disclosure of metal hydride stabilizing compounds is still limited to those compounds having the formula $D_x[MH_aR_b]_y$, wherein D is an inorganic or organic cation, M is aluminum or boron, and R is as defined at column 4. Appellants have been unable to identify a compound which meets the limitations of having the formula $D_x[MH_aR_b]_y$, wherein D is an inorganic or organic cation, M is aluminum or boron, and R is as defined at column 4, and also meets the limitations of the presently claimed aryl carboxylic acid or alicyclic carboxylic acid having the formula R-R^1-COOX or R-COOX, wherein R, R^1, and X are particularly defined (see above and Claim 1). In fact, it is submitted that such a compound does not exist.

Bringley's disclosure of (column 4, line 50) is limited to compounds wherein is a linking group between 2 to 3 linked rings. Accordingly, Bringley's disclosure is necessarily limited to those compounds wherein the  group is bounded by at least one ring on each of its sides. On the other hand, the -COO moiety of the presently claimed aryl carboxylic acid or alicyclic carboxylic acid is a -COOX moiety, wherein X represents a hydrogen atom, alkaline metal, or $-N^+(R^2)_4$ (where R^2 represents an alkyl group whose number of carbons is 2 or less). Accordingly, Bringley, which is limited to compounds wherein is a linking group between 2 to 3 linked rings, does not disclose the

presently claimed aryl carboxylic acid or alicyclic carboxylic acid having the formula R-R^1-COOX or R-COOX, wherein R, R^1, and X are particularly defined (see above and Claim 1).

In the Response filed August 3, 2004, Appellants requested that the Examiner identify a particular compound which has the formula $D_x[MH_aR_b]_y$ and also meets the limitations of the presently claimed aryl carboxylic acid or alicyclic carboxylic acid. Such a compound was not identified by the Examiner, *e.g.*, in the September 7th Advisory Action.

Finally, Appellants would like to point out the following as further evidence of the patentability of the claimed invention.

In Bringley, the metal hydride compound is used for preventing yellowing. Appellants refer to column 3, Summary of the Invention. Examples 1 to 3 at Bringley's Table 1 show higher PSL responses than the PSL response of the comparative example because the metal hydride stabilizing compounds enhance stability against yellowing of the panel.

In contrast, the present invention has been made based on the finding that the imaging plate having high PSL response and improved running durability can be obtained by improving the dispersion stability of the phosphor material to have high phosphor fill ratio. Appellants refer to the section from page 28, line 23, to page 29, line 25, and Table 1 of the present specification. The high PSL response of the invention is obtained because of the high phosphor fill ratio, not because of preventing yellowing. Therefore, the present invention would not have been anticipated by Bringley.

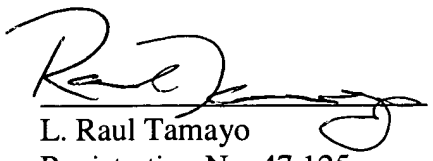
In short, Bringley does not show the identical invention of Claim 1 in as complete detail as is contained in Claim 1.

For at least the foregoing reasons, Appellants respectfully submit that Bringley does not anticipate the invention of Claim 1, or the inventions of Claims 2-6 and 9-10, at least by virtue of their dependence (either directly or indirectly) from Claim 1.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: December 3, 2004

CLAIMS APPENDIX

CLAIMS 1-6 and 9-10 ON APPEAL:

1. A radiation image conversion panel comprising at least:

a support body; and

a phosphor layer provided on said support body;

wherein said phosphor layer contains a binding agent, a phosphor, and at least aryl carboxylic acid or alicyclic carboxylic acid, expressed by the following general Formula:

$R\text{-}R^1\text{-}COOX$, or

R-COOX

in which R represents (1) an aryl group; (2) an aryl group, replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, a carboxylic acid group, or a halogen group; (3) a hydroaryl group; or (4) a hydroaryl group (alicyclic group), replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, or a halogen group; R^1 is a hydrocarbon radical whose number of carbons is 1 to 12; and X represents a hydrogen atom, alkaline metal, or $-N^+(R^2)_4$ (where R^2 represents an alkyl group whose number of carbons is 2 or less).

2. The radiation image conversion panel as set forth in claim 1, wherein the letter R in said general Formula is either (1) an aryl group or (2) an aryl group, replaced with an alkyl group whose number of carbons is 1 to 5, a hydroxyl group, or a halogen group.

3. The radiation image conversion panel as set forth in claim 1, wherein said binding agent is thermoplastic elastomer with a softening temperature or melting point of 30 to 150 °C.

4. The radiation image conversion panel as set forth in claim 2, wherein said binding agent is thermoplastic elastomer with a softening temperature or melting point of 30 to 150 °C.

5. The radiation image conversion panel as set forth in claim 3, wherein said binding agent is polyurethane resin.

6. The radiation image conversion panel as set forth in claim 4, wherein said binding agent is polyurethane resin.

9. The radiation image conversion panel as set forth in claim 1, wherein said phosphor layer is formed by dispersing and coating said phosphor, said aryl carboxylic acid or alicyclic carboxylic acid, and said binding agent, and said phosphor layer and said support body are bonded together by placing said phosphor layer on said support body and compressing said phosphor layer at a temperature higher than the softening temperature or melting point of said binding agent.

10. The radiation image conversion panel as set forth in claim 1, wherein a surface process is performed on particles of said phosphor with said aryl carboxylic acid or alicyclic carboxylic acid, said phosphor layer is formed by dispersing and coating said surface-processed phosphor particles and said binding agent, and said phosphor layer and said support body are bonded together by placing said phosphor layer on said support body and compressing said phosphor layer at a temperature higher than the softening temperature or melting point of said binding agent.

EVIDENCE APPENDIX:

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

NONE

RELATED PROCEEDINGS APPENDIX

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified about in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

NONE